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THESIS

**WHEN SUKARNO SOUGHT THE BOMB:
INDONESIAN NUCLEAR ASPIRATIONS
IN THE MID-1960s**

by

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March 1999

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INDONESIAN NUCLEAR ASPIRATIONS IN THE MID-1960S**

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Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF ARTS IN NATIONAL SECURITY AFFAIRS

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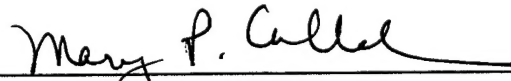
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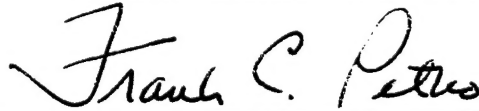
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ABSTRACT

Proponents of nuclear nonproliferation, such as the United States, seek to develop policies that address the root causes of nuclear proliferation. The discipline of international relations aids in this effort by providing theories that attempt to explain why states choose to build nuclear weapons. Most theories simplify the process of proliferation by using only one of three generally accepted explanations: security, domestic politics, or norms. The case of Indonesia, however, illustrates that proliferation is best explained by investigating all three dimensions as well as the role of technology.

This thesis evaluates competing theories of nuclear proliferation using a historical case study of Indonesia's aspirations to acquire nuclear weapons during 1964-1965, and supports the view that multiple variables are necessary to explain the spread of nuclear weapons. As evidence, this thesis examines Indonesian President Sukarno's little-known nuclear aspirations in the mid-1960s. Although Sukarno was ultimately unsuccessful in his effort to acquire atomic weapons, his decision to seek them was influenced by a variety of factors that included Indonesia's security needs, domestic political considerations, norms, and available nuclear energy technology.

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EXECUTIVE SUMMARY

This thesis evaluates competing theories of nuclear proliferation using a historical case study of Indonesia's aspirations to acquire nuclear weapons during 1964-1965, and demonstrates that several variables are necessary to account for Indonesia's proliferation decision. It suggests that multiple variables are necessary to explain the spread of nuclear weapons. The secondary purpose of this thesis is to use the Indonesian case to judge the effectiveness of early U.S. nonproliferation policy under the Atoms for Peace program.

Although largely forgotten today, Indonesian leaders actively sought to acquire and test nuclear weapons in the mid-1960s. Indonesian government officials began publicizing their intent to acquire an atom bomb shortly after the People's Republic of China (PRC) exploded its first nuclear device in October 1964. By July 1965, Indonesian President Sukarno was publicly vaunting his country's future nuclear status. However, Indonesia did not have the indigenous capability necessary to produce its own nuclear weapon, and as a result focused its effort on procuring an atom bomb from other states that could produce them. One plan was for Indonesia's leaders to request assistance from the PRC. The Indonesians envisioned the PRC exploding an atom bomb in Indonesian territorial waters and allowing the Sukarno government to take credit for the test. Another plan called for purchasing an atom bomb from France. Neither effort succeeded.

Two scholars of nuclear proliferation, Scott Sagan and Tanya Ogilvie-White, offer useful guidance in explaining Sukarno's aspirations to acquire the bomb. They argue that each case of proliferation is different from the rest and that a variety of factors, both external and internal, can affect a state's proliferation decision. In the case of Indonesia, the primary external variable affecting Sukarno's decision was the perceived threat to Indonesia's security from the West. Sukarno viewed British support for the new Federation of Malaysia and American involvement in Vietnam as neocolonialist efforts to lay siege to Indonesia. This thesis lays out an alternative history in which Sukarno remains in power beyond 1965, to estimate whether this external variable would still be important. In such a scenario, security remains an important factor in Sukarno's nuclear decisions. An improved security position through membership in the international Communist camp would have almost certainly led Sukarno to abandon his efforts to acquire the bomb.

The main internal variables that affected Sukarno's decision were domestic politics, norms, and technology. The mid-1960s were a turbulent period in Indonesia's history and Sukarno leveraged the idea of an Indonesian bomb to sway the tide of domestic events in his favor. American nuclear technology transferred to Indonesia under the Atoms for Peace program bolstered Sukarno's nuclear aspirations by making the idea of an Indonesian bomb plausible to outside parties and by directing the government to an outside source for nuclear weapons assistance. But had Sukarno secured the domestic

front, different domestic political considerations would probably have led him to abandon this pursuit.

Thus, a combination of several variables—security, domestic politics, norms, and technology—are necessary to explain why Sukarno and his leaders made the decision to pursue the bomb. Moreover, it is apparent that more than one variable is necessary to explain why Sukarno would have abandoned his nuclear aspirations had he remained in power beyond 1965. This evidence suggests that multiple variables may be necessary to explain the spread of nuclear weapons in other cases.

The Indonesian case also sheds light on U.S. nonproliferation policy under the Atoms for Peace program. During the early 1960s, the United States provided Indonesia with nuclear assistance in an effort to promote peaceful uses of the atom and discourage the pursuit of nuclear weapons. On the surface, it appears that Atoms for Peace failed in Indonesia because the Sukarno government was undeterred in its desire to acquire the bomb. Upon further examination, however, it becomes apparent that Atoms for Peace was useful as a nonproliferation policy because it permitted the United States to remain engaged with Indonesia and keep apprised of nuclear developments within the country. Hence, the U.S. government was able to make an accurate assessment of Indonesia's indigenous nuclear capability, determine that the government could not produce a bomb, and focus nonproliferation efforts on

thwarting the possibility that China or France might provide Sukarno with nuclear weapons.

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The author also wants to thank Dr. James Wirtz for his encouragement to write about nuclear proliferation, Jim Walsh for providing helpful insight into Indonesian nuclear aspirations, and Ben Abel for assisting thesis research at Cornell University. Most importantly, the author wants to thank Dr. Mary Callahan and Michael Barletta for their invaluable support as thesis advisors and as professors at the Naval Postgraduate School.

I. INTRODUCTION

Since the 1980s, the discipline of international relations has expanded to include the study of nuclear proliferation as numerous scholars develop theories to explain why nuclear weapons spread in the international system. This theorizing is beneficial to proponents of nonproliferation, such as the United States. By addressing the root causes of proliferation, proliferation theory can provide guidance for nonproliferation policy. However, theorizing on the spread of nuclear weapons is also confusing to supporters of nonproliferation because, as Scott Sagan concludes, "the historical record suggests that each theory explains some past cases quite well and others quite poorly."¹ Sagan's conclusion leads to the question posed by Tanya Ogilvie-White, "Is there a theory of nuclear proliferation?"²

The purpose of this thesis is to evaluate competing theories of nuclear proliferation using a historical case study of Indonesia's aspirations to acquire nuclear weapons during 1964-1965, and to demonstrate that several variables are necessary to account for Indonesia's proliferation decision. The secondary purpose of this thesis is to use the Indonesian case to judge the effectiveness of early U.S. nonproliferation policy under the Atoms for Peace program.

¹ Scott D. Sagan, "Why Do States Build Nuclear Weapons? Three Models in Search of a Bomb," *International Security* 21, no. 3 (1996/97): 56.

² Tanya Ogilvie-White, "Is There a Theory of Nuclear Proliferation? An Analysis of the Contemporary Debate," *The Nonproliferation Review* 4, no. 1 (1996): 43.

Although largely forgotten today, Indonesian leaders actively sought to acquire and test nuclear weapons in the mid-1960s. Indonesian government officials began publicizing their intent to acquire an atom bomb shortly after the People's Republic of China (PRC) exploded its first nuclear device in October 1964. By July 1965, Indonesian President Sukarno was publicly vaunting his country's future nuclear status. However, Indonesia did not have the indigenous capability necessary to produce its own nuclear weapon, and as a result focused its effort on procuring an atom bomb from other states that could produce them. One plan was for Indonesia's leaders to request assistance from the PRC by exploiting the newly created Peking-Jakarta axis.³ The Indonesians envisioned the PRC exploding an atom bomb in Indonesian territorial waters and allowing the Sukarno government to take credit for the test. Another plan called for purchasing an atom bomb from France. Neither effort succeeded.

Indonesia's "proliferant" behavior was characterized by an atypical proliferation decision and an ineffectual procurement effort.⁴ An historical case study of Indonesia's nuclear aspirations will focus on the decision to pursue nuclear weapons. This case suggests that multiple variables are necessary to

³ The Peking-Jakarta axis is the term coined by scholars to describe the informal alliance formed in early 1965, between the governments of Indonesia and the People's of Republic of China. The axis was not based on a treaty or formal legal agreement, but rather a series of agreements to cooperate in areas such as trade and technology. Fundamental to the development of this axis was the two governments' shared interest in driving Western imperialism from Southeast Asia. See Jay Taylor, *China and Southeast Asia* (New York: Praeger, 1976), 82-84.

⁴ According to Stephen Meyer, a "proliferation decision" is an explicit government decision to transform a latent nuclear capability into an operational nuclear weapons capability. This decision usually follows a "capability decision" to develop the indigenous technological and industrial capacity to support a nuclear weapons program. The Indonesian case is noteworthy because it

explain the spread of nuclear weapons and supports Sagan's assertion that proliferation has occurred in the past and will occur in the future for more than one reason.⁵

This thesis is important because both the literature on nuclear proliferation and the literature on Indonesia largely ignore Indonesia's effort to become a nuclear state. Instead, proliferation research has concentrated on explaining well-known cases, such as India, Pakistan, Israel, and Iraq. While Indonesia's aspirations were unrealistic and short-lived, this episode provides a new opportunity to evaluate the leading theoretical explanations for proliferation.

This thesis is organized in five chapters. Following this introduction, the second chapter explains the prevailing theoretical perspectives on why nuclear weapons spread as the theories apply to Indonesia. The third chapter outlines the historical evolution of Indonesia's nuclear aspirations and explains Indonesia's proliferation decision in terms of several different variables. The fourth chapter considers a counterfactual possibility of Indonesia's nuclear venture by outlining a historical sequence that might have happened, but did not. Specifically, this chapter sketches an alternative history to support the argument that a multicausal approach best explains nuclear proliferation. In the fifth chapter, the thesis brings together theory, history, and the counterfactual possibility in two discussions. First, using the real and counterfactual histories,

involved a proliferation decision without a capability decision. See Stephen M. Meyer, *The Dynamics of Nuclear Proliferation* (Chicago: The University of Chicago Press, 1984), 5-6.

⁵ Sagan, 85.

this chapter will evaluate the degree to which the best theory, or best combination of theories, accounts for the case of Indonesia. Second, this chapter will step back from theory and discuss the implications that the case of Indonesia has for American nonproliferation policy.

The majority of the data for this thesis was obtained from Cornell University's Kroch Library Southeast Asia Collection during a research trip in June 1998. Primary sources include telegrams and memorandums from the U.S. Departments of State and Defense and the Central Intelligence Agency obtained from President Johnson's declassified National Security Files. These documents provide firsthand accounts of events in Indonesia during the early 1960s from American diplomats, military attachés, and policy analysts. Other primary sources include Indonesian-language government publications from the 1950s and 1960s that provide domestic views on nuclear power and nuclear weapons.⁶ Secondary sources include the contemporary literature on nuclear proliferation, newspaper accounts from the 1960s, and several books on Indonesian government and security. Primary source information about the decision-making process of Indonesia's top leaders during 1964-1965 is not available. Therefore, the thesis relies on second-hand accounts when analyzing Indonesia's nuclear aspirations at the decision-making level.

⁶ Translations from Indonesian are by the author.

II. THEORIES OF NUCLEAR PROLIFERATION

A. THE PROLIFERATION PUZZLE

There are numerous theories that attempt to explain why states choose to build nuclear weapons to solve what scholars call the "proliferation puzzle."⁷ Each of these theories attempts to isolate certain conditions, or independent variables, that cause nuclear weapons proliferation, the dependent variable. Most theories attempt to simplify proliferation by searching for its causes in only one of the three generally accepted levels of analysis: the international level, the state level, or the individual level.⁸ The case of Indonesia, however, illustrates that proliferation can be better explained by investigating multiple levels of analysis as well as the role of technology. The purpose of this chapter is to review the various proliferation theories and highlight those that apply to Indonesia. The chapter will categorize proliferation theories using the theoretical framework suggested by Sagan to explain why states build nuclear weapons: security, domestic politics, and norms.⁹ Additionally, this thesis will follow Zachary S. Davis' recommendation to add a fourth category, technology, to the

⁷ Zachary S. Davis and Benjamin Frankel use the term "proliferation puzzle" as the title of their survey of proliferation theories. See Zachary S. Davis and Benjamin Frankel, ed., *The Proliferation Puzzle* (London: Frank Cass and Co. Ltd., 1993).

⁸ In international relations theory, levels of analysis are different levels in which variables influence the behavior of states in international politics. Political scientists analyze the different levels to determine if changes in the variables at a certain level account for changes in a state's behavior. See Robert Jervis, *Perception and Misperception in International Politics* (Princeton, New Jersey: Princeton University Press, 1976), 15.

⁹ Sagan, 55.

three-level framework that Sagan and other scholars use to search for the variables that contribute to proliferation.¹⁰

B. SECURITY

Two theories that largely dominate the field of international relations, realism and neorealism, also dominate security explanations for nuclear proliferation. In general, proliferation theories that rely on either realism or neorealism cite conditions in the international setting to explain the spread of nuclear weapons. Specifically, these theories argue that states will seek the bomb to protect their security from threats in the international environment. In analyzing the case of Indonesia, realism provides the most helpful of the two security explanations for proliferation.

Realism focuses on external threats to explain the spread of nuclear weapons. For example, Bradley Thayer contends that nuclear proliferation is mainly caused by "the desire of states to gain increased security from external attack in an anarchic world."¹¹ Thayer argues that realism isolates three conditions related to states' military capabilities that could explain this phenomenon. Specifically, he claims that military capabilities are inherently offensive capabilities, that military capabilities add uncertainty to states' intentions, and that states' security depend on their military capabilities relative to

¹⁰ Zachary S. Davis, "Solving the Proliferation Puzzle: The Role of Theory in Nonproliferation Analysis," in *Director's Series on Proliferation*, ed. Kathleen C. Bailey (Livermore, California: Lawrence Livermore National Laboratory, 1995), 47.

¹¹ Bradley A. Thayer, "The Causes of Nuclear Proliferation and the Utility of the Nuclear Nonproliferation Regime," *Security Studies* 4, no. 3 (1995): 468.

other states' military capabilities.¹² As a result of these conditions being prevalent throughout the international environment, Thayer predicts that states will be fearful and hesitant, will behave in a "self-help manner," and will act to maximize their military power relative to other states.¹³ His prediction leads to the conclusion that states build nuclear weapons because of prudent concerns that their security is at risk. According to Thayer, this need for security is both necessary and sufficient to cause nuclear proliferation.¹⁴ This thesis will partly disagree with Thayer and show that Indonesia's need for security from external threats is necessary, but not sufficient, to explain Sukarno's pursuit of the bomb.

Neorealism assumes the same conditions as realism, but further asserts that the structure of the international system can explain states' behavior.¹⁵ As such, neorealists analyze the organization of states within the international structure to determine outcomes. Benjamin Frankel uses this reasoning to explain proliferation by arguing that there is a "causal relationship between the structure of the international system and the spread of nuclear weapons."¹⁶

¹² Ibid., 483.

¹³ Ibid., 484-485.

¹⁴ Ibid., 486. Thayer's explanation represents one of many proliferation theories in the literature that relies on realism. Another example was proposed by Zachary S. Davis, "The Realist Nuclear Regime," in *The Proliferation Puzzle*, ed. Zachary S. Davis and Benjamin Frankel (London: Frank Cass and Co. Ltd., 1993).

¹⁵ Ogilvie-White, 46.

¹⁶ Benjamin Frankel, "The Brooding Shadow: Systemic Incentives and Nuclear Weapons Proliferation," in *The Proliferation Puzzle*, ed. Zachary S. Davis and Benjamin Frankel (London: Frank Cass and Co. Ltd., 1993), 37. Scott Sagan also uses neorealism to develop his "security model" that is based on the belief that the organization of states within the international environment determines a state's security measures. According to Sagan, a state will build nuclear weapons when it has no other means to balance against an emerging nuclear threat to its security. Mitchell Reiss and Robert Litwak are likewise influenced by the neorealist view of the world in their discussion of post-cold war nuclear proliferation. They argue that nuclear weapons states' bilateral or multilateral security guarantees to nonnuclear weapons states hindered nuclear

Specifically, Frankel claims that a bipolar system constrains the spread of nuclear weapons while a multipolar system encourages nuclear proliferation.¹⁷ Neorealism is less helpful in explaining Sukarno's proliferation decision because Indonesia during the mid-1960s was a nonaligned country that preferred to remain equidistant between the two nuclear superpowers: the United States and the Soviet Union. Therefore, the structure of the international system, whether bipolar or multipolar, mattered little to Sukarno because his country had security guarantees from neither the American nor the Soviet camps.

C. DOMESTIC POLITICS

Domestic politics explanations for proliferation focus on domestic actors who influence a government to acquire nuclear weapons.¹⁸ According to Sagan's "domestic politics model," these actors press their state to pursue the bomb in pursuit of their parochial bureaucratic or political interests.¹⁹ Individuals whom might be motivated to undertake such a venture may belong to a particular bureaucracy, such as a state's nuclear energy establishment or a state's military, or they may be politicians.²⁰ While Sagan accounts for the role of individual politicians, other theories focus exclusively on the workings of a state's

proliferation during the cold war. See Mitchell Reiss and Robert S. Litwak, ed., *Nuclear Proliferation after the Cold War* (Washington, DC: The Woodrow Wilson Center Press, 1994).

¹⁷ Ibid., 45-46. Frankel notes that during the cold war, a bipolar world order existed in which the superpowers were willing to provide security for their minor partners. This arrangement lessened the security needs of the non-superpower states and curbed the spread of nuclear weapons. Frankel argues that in the multipolar post-cold war era, an increase in the number of nuclear weapons states should be expected because the non-superpower states will face increased security needs. To date, there is little evidence to support this view.

¹⁸ Sagan, 63.

¹⁹ Ibid.

bureaucracy to identify the causes of nuclear proliferation. These theories often use Graham Allison's "bureaucratic politics model" as a starting point for their analysis of the causes of nuclear proliferation.²¹

For example, Peter Lavoy theorizes that a state will decide to build nuclear weapons when bureaucratic members "who want their country to build nuclear bombs, exaggerate security threats to make a 'myth of nuclear security' more compelling."²² Thus, nuclear proliferation can be directly linked to the strategic beliefs and political activities of these bureaucrats, or nuclear "myth makers" as Lavoy calls them.²³ Lavoy rests his argument on three assumptions not unlike the assumptions Allison implies in his model of state behavior: the convictions of individuals matter in a state's decision-making process; the beliefs of policymakers about nuclear weapons are particularly important; and talented and well-placed experts can help create and perpetuate nuclear myths among policymakers.²⁴

²⁰ Ibid., 63-64.

²¹ See Graham T. Allison, "Conceptual Models and the Cuban Missile Crisis," *American Political Science Review* 63, no. 3 (1969): 715. Allison argues that a state's behavior can be understood as the outcomes of bargaining games. According to Allison, "national behavior in international affairs can be conceived as outcomes of intricate and subtle, simultaneous, overlapping games among players located in positions, the hierarchical arrangement of which constitutes that government." In other words, the interests of individual bureaucrats in a state can influence the outcome of a state's behavior. As such, the independent variables that determine whether a state decides to build nuclear weapons are the various interests of members and organizations involved in a state's nuclear decision-making process.

²² Peter R. Lavoy, "Nuclear Myths and the Causes of Nuclear Proliferation," in *The Proliferation Puzzle*, ed. Zachary S. Davis and Benjamin Frankel (London: Frank Cass and Co. Ltd., 1993), 192.

²³ Ibid.

²⁴ Ibid., 199.

This thesis will show that Sagan's general "domestic politics model" is the most relevant theory, among the various domestic politics explanations, to account for Indonesia's proliferation decision. The next chapter will cite evidence that President Sukarno sought the bomb as a means of fulfilling his own domestic political agenda in the broad sense described by Sagan. Additionally, the next chapter will explain how the perceptions of individual Indonesians were interwoven with domestic political considerations in Sukarno's pursuit of the bomb. There is little evidence, however, that bureaucratic politics was a significant influence on Sukarno's proliferation decision.

D. NORMS

Proliferation theories based on norms explain the spread of nuclear weapons in terms of what individuals within a state think their government should do in the nuclear field. For example, Sagan's "norms model" claims that a state's behavior is determined by its leader's deep norms and shared beliefs about what actions are "legitimate and appropriate in international relations."²⁵ Therefore, a state's decision to build nuclear weapons is related to what its leaders perceive as normative in international relations. Sagan focuses on the perceptions of individual leaders, but the perceptions of individual citizens may be equally as important when explaining proliferation.

For example, Ted Greenwood argues that nuclear weapons can bolster a state's self-confidence and prestige and restore or strengthen popular support for

a government.²⁶ With this in mind, leaders may pursue the bomb as a means to rally their people to support a particular political agenda. To do this, however, leaders must stress to their people that nuclear weapons are prestigious and an important cause for national pride. According to Thayer, "the perception that all great powers must have nuclear weapons" is key to this process.²⁷ This thesis will argue that in the case of Indonesia, Sukarno played upon individual perceptions about the prestige of the bomb to garner support for his own political interests.

E. TECHNOLOGY

In general, technology theories argue that "a latent capacity to manufacture nuclear weapons is, in itself, sufficient to produce a decision to do so."²⁸ Today, most theorists reject the idea that technology is both necessary and sufficient to cause the spread of nuclear weapons. However, even if there is no technological imperative to build a nuclear arsenal, Stephen Meyer asserts that there is evidence that nuclear technology can affect decisions about nuclear weapons.²⁹ Sukarno's proliferation decision in particular was affected by newly acquired nuclear technologies provided by the United States through the Atoms for Peace program.

²⁵ Sagan, 73.

²⁶ Ted Greenwood, *Nuclear Proliferation* (New York: McGraw-Hill Book Co., 1977), 51.

²⁷ Thayer, 468.

²⁸ Meyer, 12.

²⁹ Ibid., 90.

Steven Flank attempts to explain the role of technology in nuclear decisions by focusing on the technological processes of nuclear weapons development. Flank examines the evolution of large technological systems (LTS) to explain the path of nuclear weapons development.³⁰ His analysis uses social construction of technology (SCOT) theory that is based on the premise that there are profound links between society and technology.³¹ Specifically, SCOT theory views proliferation as the evolution of technology in society. Flank advocates a methodology that “explodes the black box,” or looks closely inside the affairs of a state's technological complex, to uncover how technology works in relation to society.³² Although Indonesia under Sukarno failed to build a viable nuclear LTS, SCOT theory will help explain how Indonesia's limited access to nuclear technology affected Indonesian aspirations to acquire the bomb.

F. MULTICAUSAL APPROACHES

Several scholars argue that a multicausal approach best explains the spread of nuclear weapons. Sagan, for example, proposes the need for three models to explain nuclear proliferation: a “security model,” a “domestic politics model,” and a “norms model.”³³ Individually, these models are similar to other proliferation theories based on realism, neorealism, bureaucratic politics, or individual perceptions. However, Sagan recommends that these models be

³⁰ Steven Flank, “Exploding the Black Box: The Historical Sociology of Nuclear Proliferation,” *Security Studies* 3, no. 2 (Winter 1993/94): 259.

³¹ *Ibid.*, 263.

³² *Ibid.* Note that Flank does not advocate a specific proliferation theory, but rather a methodology to understand the social and political processes of nuclear proliferation.

used together in a multicausal approach to better account for the numerous cases where proliferation occurred for more than one reason.³⁴

Similarly, Tanya Ogilvie-White reviews seven different categories of proliferation theories and concludes that none of the existing theories provide a satisfactory explanation of proliferation dynamics.³⁵ Her categories include classical realism, neorealism, neoliberal institutionalism, organizational theory, belief systems theory, learning models, and SCOT theory. Ogilvie-White notes that many of these theories provide important pieces of the proliferation puzzle.³⁶ Therefore, she argues that nuclear proliferation must be viewed as the consequence of a combination of internal and external pressures and constraints.³⁷

The case of Indonesia's proliferation effort during the mid-1960s is complicated and several theories are required for an adequate explanation. The next chapter will uncover the factors that influenced Indonesia's government during the early 1960s and led to President Sukarno's decision to make Indonesia a nuclear weapons state.

³³ Sagan, 55.

³⁴ Ibid.

³⁵ Ogilvie-White, 55.

³⁶ Ibid.

³⁷ Ibid. See also Rodney W. Jones, "Atomic Diplomacy in Developing Countries," *Journal of International Affairs* 34, no. 1 (Spring/Summer 1980): 89-117. Jones' multicausal approach attempts to explain nuclear proliferation in terms of the foreign policy of developing countries. Jones suggests that some less developed countries (LDCs) may seek to "make what they actually do, might do, or could refrain from doing with their nuclear programs, conditional, i.e., linked to desired responses from major powers, local neighbors, or the international community." In other words, the leaders of LDCs are prone to make proliferation decisions for foreign policy reasons. Jones supports this view by examining security considerations and individual norms that may lead LDCs to use the pursuit of nuclear weapons in their foreign policy.

III. HISTORICAL CASE STUDY

The purpose of this chapter is to outline the historical evolution of Indonesia's nuclear aspirations and identify variables that explain the decision by national leaders to become a nuclear weapons state. First, the chapter outlines the history beginning with the Atoms for Peace program of nuclear assistance that began in 1960, and ending with Indonesia's unsuccessful attempts to acquire an atom bomb during 1965. Second, the chapter explains the possible reasons why Indonesia attempted to become a nuclear weapons state.

A. EVOLUTION OF INDONESIA'S NUCLEAR ASPIRATIONS

1. American Nuclear Assistance

In 1958, Indonesian Foreign Minister Dr. Subandrio wrote that his country "does not have atomic weapons or nuclear weapons" and "does not have interest in that direction."³⁸ Subandrio's statement accurately represented the official Indonesian government position on nuclear weapons for the next six years. During this period, the Indonesian government created an Institute of Atomic Energy (or LTA, Lembaga Tenaga Atom) to supervise nuclear research and develop atomic energy.³⁹ However, the LTA limited its efforts to planning and

³⁸ Soebandrio, G.A. Siwabessy, and Soemarno Sosroatmodjo, *Pengaruh Tenaga Atom Atau Tenaga Nuclear Dalam Hubungan Antar Negara* (Influence of Atomic Energy or Nuclear Energy in International Relations) (Jakarta: Ministry of Information, 1958), 9. Note that "Soebandrio" is the old Indonesian language spelling of "Subandrio."

³⁹ Daniel B. Poneman, "Indonesia," in *Nuclear Power in Developing Countries*, ed. James E. Katz and Onkar S. Marwah (Lexington, Massachusetts: Lexington Books, 1982), 183.

building reactors jointly with the United States and the Soviet Union to conduct research on peaceful uses of nuclear energy.⁴⁰

American nuclear assistance to Indonesia originated in June 1960, when the two countries signed a five-year, bilateral agreement under the Atoms for Peace program. Atoms for Peace was the centerpiece of U.S. nonproliferation strategy from the 1950s through the 1970s.⁴¹ The program's purpose was to discourage the proliferation of nuclear weapons by shifting international attention from the development of weapons and toward the peaceful uses of atomic energy.⁴² Toward this goal, the program transferred nuclear technology and fissile material from the stockpiles of the nuclear states to the atomic energy programs of the nonnuclear weapons states.⁴³

The Indonesian agreement became effective on September 21, 1960, and by it the United States pledged cooperation in the civilian uses of atomic energy.⁴⁴ To assist in this effort, the United States promised a \$350,000 grant toward the cost of a research reactor at Bandung once the facility was

⁴⁰ Poneman, 185. American nuclear efforts began in 1961, with construction of a TRIGA-Mark II research reactor at Bandung. Soviet nuclear assistance did not begin in earnest until 1965, when construction was started on a research reactor at Gadjah Mada Research Center in Yogyakarta.

⁴¹ Peter R. Lavoy, "Learning and the Evolution of Cooperation in U.S. and Soviet Nuclear Nonproliferation Activities," in *Learning in U.S. and Soviet Foreign Policy*, eds. George W. Breslauer and Philip E. Tetlock (Boulder, Colorado: Westview Press, 1991), 754.

⁴² McGeorge Bundy, *Danger and Survival* (New York: Random House, 1988), 287.

⁴³ Fissile material sustains nuclear chain reactions by releasing tremendous amounts of energy in a short period of time.

⁴⁴ Department of State, "Agreement for Cooperation between the Government of the United States of America and the Government of the Republic of Indonesia concerning Civil Uses of Atomic Energy," 8 June 1960, TIAS no. 4557, *United States Treaties and Other International Agreements*, vol. 11, pt. 2.

operational.⁴⁵ Additionally, the agreement permitted the U.S. Agency for International Development to send \$141,000 to assist Indonesia in developing its atomic research program.⁴⁶ However, the arrangement included nonproliferation provisions that prohibited the use of transferred materials for weapons or military purposes.⁴⁷ Specifically, the agreement stated that "no material ... will be used for atomic weapons or for research on or development of atomic weapons."⁴⁸

The small 250-kilowatt TRIGA-Mark II research reactor sold by the American firm General Dynamics became the nucleus of Indonesia's nuclear program during the early 1960s.⁴⁹ President Sukarno and U.S. Ambassador Howard P. Jones inaugurated the reactor's construction at the Institute of Technology in Bandung on April 19, 1961.⁵⁰ The facility conducted Indonesia's first successful nuclear reaction on October 17, 1964.⁵¹ By coincidence, this particular experiment occurred just one day after China exploded its first atom bomb.

The highly enriched uranium (HEU)-fueled reactor was suitable only for research and training and was not a viable source for fissile material (either plutonium or enriched uranium) for a nuclear explosion.⁵² Specifically, the

⁴⁵ "Indonesia," *Nuclear Power* 6, no. 62 (1961): 56.

⁴⁶ Poneman, 185.

⁴⁷ Senate Committee on Government Operations, *United States Agreements for Cooperation in Atomic Energy*, report prepared by the U.S. Congressional Research Service, 94th Cong., 2d sess., 1976, Committee Print, 38.

⁴⁸ Department of State, "Agreement for Cooperation between the United States and Indonesia."

⁴⁹ Poneman, 185. The name TRIGA-Mark II stands for Training Research Isotope production General Atomic-type Mark II.

⁵⁰ *Antara Home News* (Jakarta), 20 October 1964

⁵¹ Ibid.

⁵² "Indonesia Talks Big About Nuclear Club," *Business Week*, 6 February 1965, 32.

reactor was not capable of irradiating the large quantity of uranium fuel needed to generate sufficient plutonium-239 for a bomb.⁵³ Even if the reactor did produce some plutonium, the Institute of Technology did not have a chemical reprocessing facility to separate weapons-grade plutonium from the unconverted uranium and other irradiation byproducts. Moreover, the agreement with the United States limited Indonesia from possessing more than six kilograms of 20 percent enriched uranium-235 fuel at any one time.⁵⁴ Since at least 25 kilograms of HEU (uranium containing 20 percent or more of the isotope uranium-235) is necessary for an effective nuclear explosion, this measure hindered the Indonesian government from secretly diverting fuel earmarked for the TRIGA-Mark II to a nuclear weapons program.⁵⁵

2. The Chinese Nuclear Test

Indonesia's leaders first revealed their aspirations to acquire nuclear weapons shortly after the People's Republic of China (PRC) exploded its first atom bomb on October 16, 1964. Far from angering the Indonesian government, a signatory to the 1963 Nuclear Test Ban Treaty, the Chinese nuclear test was viewed quite favorably by many top Indonesian officials.⁵⁶ Roeslan Abdulgani, Indonesia's Minister of Public Relations, justified China's new nuclear capability by arguing that "an atomic bomb was of an aggressive

⁵³ For an explanation of the technical aspects of producing special nuclear materials for weapons, see U.S. Congress, Office of Technology Assessment, *Technologies Underlying Weapons of Mass Destruction*, OTA-BP-ISC-115 (Washington, D.C.: U.S. Government Printing Office, December 1993).

⁵⁴ Department of State, "Agreement for Cooperation between the United States and Indonesia."

⁵⁵ Office of Technology Assessment, 174.

nature when it was held by an aggressive country of the capitalist system, but not when it was in the hands of the nations of the socialist system."⁵⁷ Many other ministers of the Indonesian government extended similar congratulations to the PRC through the Chinese ambassador in Jakarta.⁵⁸

The PRC atomic test was motivated, in part, by a desire to support communist groups fighting wars of national liberation throughout the world.⁵⁹ Thus, the Indonesian reaction likely encouraged the Chinese to emphasize their nuclear capability as a means of garnering support for the worldwide communist movement. To illustrate, an official PRC government announcement of the test declared that "the mastering of the nuclear weapon by China is a great encouragement to the revolutionary peoples of the world in their struggles and a great contribution to the cause of defending world peace."⁶⁰ By their example, the Chinese hoped to advance wars of national liberation in countries such as Indonesia that were leaning towards communism.⁶¹ While the Chinese did not believe that they should use their new atom bomb to directly support wars of national liberation, they did believe that they could more effectively support such struggles if their country was a nuclear power.⁶²

⁵⁶ Indonesia signed the 1963 Nuclear Test Ban Treaty on October 7, 1963, in Moscow.

⁵⁷ "World Acclaims China's Nuclear Success," *Peking Review*, no. 43 (1964): 10.

⁵⁸ *Ibid.*, 9-10.

⁵⁹ Morton H. Halperin, "China and the Bomb—Chinese Nuclear Strategy," *The China Quarterly*, no. 21 (1965): 76.

⁶⁰ "China Successfully Explodes Its First Atom Bomb," *Peking Review*, no. 42 (1964): iii.

⁶¹ While Indonesian President Sukarno and his government leaders were not avowed communists, they did tacitly support the efforts of the popular Indonesian Communist Party (PKI) as a means to bolster their domestic political power.

⁶² Halperin, 81.

Initially, the PRC did not clearly articulate the limits of its nuclear support to its allies. Subsequently, one Indonesian leader quickly developed the expectation that his country could join the "nuclear club." Only a month after the Chinese test, Brigadier General Hartono, Director of the Army Ordinance Department, became the first Indonesian leader to express this new hope. Hartono told the Indonesian news agency Antara that by 1965, Indonesia would probably be able to explode its own atom bomb.⁶³

Hartono's claim received international press coverage and elicited reactions from several foreign governments. Tun Abdul Razak, neighboring Malaysia's Deputy Prime Minister, doubted the Indonesian claim but indicated that he would make inquiries into the matter because, if true, "it is a serious threat."⁶⁴ In Australia, Defense Minister Shane Paltridge expressed his government's view that the possibility of an Indonesian nuclear weapon could not be viewed lightly despite the absence of evidence supporting Hartono's assertion.⁶⁵ In the United States, the Associated Press reported Hartono's boast as well as reactions from officials in the U.S. Department of State and the U.S. Atomic Energy Commission who called the claim "absurd" and "impossible."⁶⁶ According to these agencies, "Indonesia did not have the capability of refining atomic materials for an explosion or building of a device to set it off."⁶⁷

⁶³ *Antara Home News* (Jakarta), 16 November 1964.

⁶⁴ *Indonesian Observer* (Jakarta), 17 November 1964.

⁶⁵ *Ibid.*, 18 November 1964.

⁶⁶ *The New York Times*, 16 November 1964.

⁶⁷ *Ibid.*

The American assessment was based on the knowledge that Indonesia's only nuclear capability was the TRIGA-Mark II and that the LTA was plagued by a shortage of competent staff.⁶⁸ Although the reactor at Bandung had recently conducted its first successful nuclear reaction, the Americans knew that the facility could not be used to build a nuclear weapon. Moreover, the Americans knew that the Indonesian government lacked nuclear engineers to develop nuclear weapons. The shortage of trained personnel is illustrated by the fact that Dr. G.A. Siwabessy, who served as director of the LTA, was a medical doctor of radiology rather than a trained nuclear engineer. Additional evidence of Indonesia's limited human resources in the nuclear field can be seen in the following figures that depict the number of personnel sent for nuclear training, both domestically and abroad, between 1958-1965.

⁶⁸ Poneman, 184.

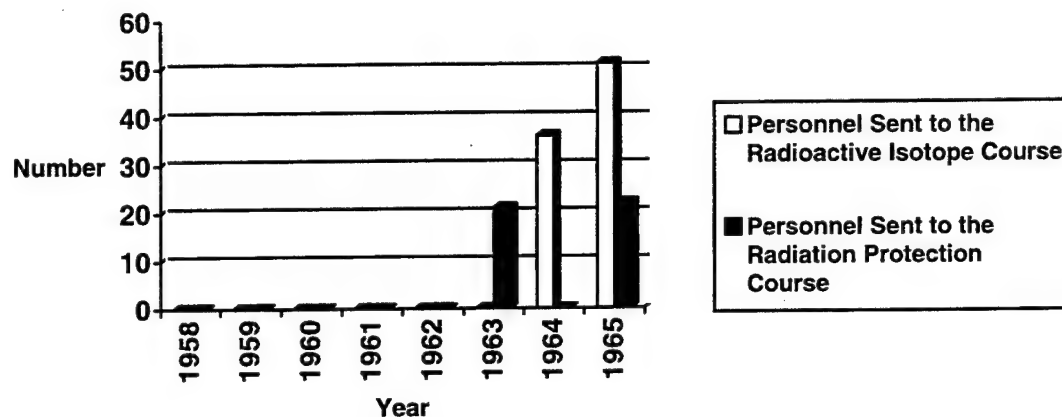


Figure 1. Nuclear Training Conducted in Indonesia, 1958-1965

From *Sepuluh Tahun Tenaga Atom di Indonesia, 5 Desember 1958-5 Desember 1968* (Ten Years of Atomic Energy in Indonesia, 5 December 1958-5 December 1968) (Jakarta: Indonesian Atomic Energy Agency, 1968), 3.9.

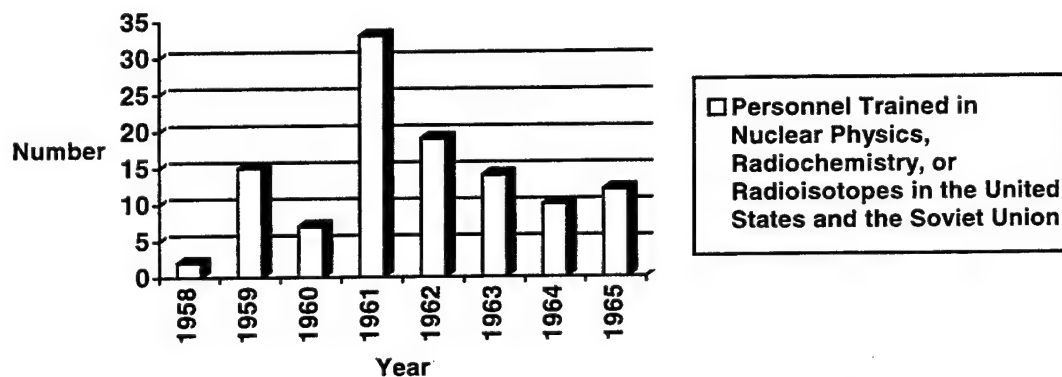


Figure 2. Nuclear Training Received Outside Indonesia, 1958-1965

From *Sepuluh Tahun Tenaga Atom di Indonesia, 5 Desember 1958-5 Desember 1968* (Ten Years of Atomic Energy in Indonesia, 5 December 1958-5 December 1968) (Jakarta: Indonesian Atomic Energy Agency, 1968), 3.10; and from Daniel B. Poneman, "Indonesia," in *Nuclear Power in Developing Countries*, ed. James E. Katz and Onkar S. Marwah (Lexington, Massachusetts: Lexington Books, 1982), 185.

According to these figures, Indonesia trained less than 300 people in the eight years prior to the government's proliferation decision. Despite this small pool, Hartono continued to advertise his country's nuclear potential, boasting that Indonesia "could immediately mobilize nuclear physicists to start working on the fabrication of a nuclear bomb."⁶⁹

3. Armed Forces Day Surprise

In the months after China's nuclear test, the Indonesian government moved closer to political alignment with the PRC. By January 1965, President Sukarno had informally allied Indonesia with China in the Peking-Jakarta Axis.⁷⁰ At the same time, *The New York Times* reported that the PRC was training Indonesian technicians at its nuclear plants, "presumably to meet Mr. Sukarno's ambitions to develop his own nuclear capability."⁷¹ In February, Brigadier General Hartono announced that 200 Indonesian atomic scientists were conducting tests on the production of an atom bomb.⁷² Apparently, Hartono believed that technicians trained in essentially unrelated tasks such as the application of radioactive isotopes were qualified to build nuclear weapons. Hartono also stated that the Army Ordinance Corps had been ordered to provide a "surprise" on the forthcoming Armed Forces Day, October 5.⁷³ While Hartono

⁶⁹ *Indonesian Observer* (Jakarta), 23 December 1964.

⁷⁰ The informal Peking-Jakarta Axis began on January 28, 1965, when the Chinese and Indonesian foreign ministers signed an economic and technical cooperation agreement and pledged to strengthen friendly military contacts. See "China-Indonesia Joint Statement," *Peking Review*, no. 6 (1965): 8.

⁷¹ *The New York Times*, 8 January 1965.

⁷² *Antara Home News* (Jakarta), 2 February 1965.

⁷³ *Ibid.*

did not elaborate on the nature of the Armed Forces Day surprise, his statement seemed to indicate that October 5 was the target date for an Indonesian nuclear test.⁷⁴ These reports caused concern in the United States because Indonesia's plans appeared to threaten the United Nations-sponsored test ban treaty.⁷⁵

In the meantime, the U.S. Department of State was seeking to deepen its understanding of Indonesia's nuclear weapons potential. American diplomats in Jakarta began asking their Indonesian contacts about Brigadier General Hartono and discovered that their initial assessment was correct. In a confidential telegram from the American embassy, diplomats sent the following memorandum of conversation to Washington:

Rector of University Indonesia, Sumantri, in conversation with CAO [Cultural Affairs Officer] said Gen Hartono "doesn't know what he is talking about" in recent statements about Indonesia's up-coming nuclear capability. Sumantri, who last year toured China's atomic setup and initiated the Indonesian military collaboration with the Institute of Technology Bandung, was a university classmate of Hartono's. He said that if Indonesia were to have such capability "it would have to be given to us."⁷⁶

This telegram confirmed the American belief that Indonesia's scientific and industrial capacity was too primitive to support an indigenous nuclear weapons capability. To American diplomats, it was becoming apparent that if

⁷⁴ "Indonesia Talks Big About Nuclear Club," 32.

⁷⁵ Ibid.

⁷⁶ Department of State, "Incoming Telegram from American Embassy Jakarta," 10 February 1965, *LBJ National Security Files, Asia & the Pacific: 1963-1969*, Indonesia Cables on microfilm, reel 7, frame 0368.

Indonesia were to become a nuclear power, an outside party would have to contribute to the effort.

4. President Sukarno's Support

Prior to July 1965, President Sukarno did not publicly declare his support for an Indonesian nuclear weapon. However, in November 1964, he did express his support for using newfound atomic knowledge to help Indonesia in a new revolution. Indonesia's first revolution had been waged against Dutch colonialism during the late 1940s. In the early 1960s, Sukarno sought to return Indonesia to revolution, but this time against the forces of colonialism, neocolonialism, and imperialism (known as NEOKLIM, Neo-Kolonialis, Kolonialis, dan Imperialisme) that he believed were being sustained by the western powers in Southeast Asia.⁷⁷ Sukarno's revolutionary fervor pervaded his view of almost all important developments within Indonesia, including the atom. In a presidential law regarding atomic energy passed on November 26, 1964, Sukarno stated that the materials for producing atomic energy and the materials for producing nuclear fuel are "important for the people and the nation in finishing the national revolution, and because of that should be possessed and mastered by the nation."⁷⁸ Thus, even before Sukarno openly advocated the bomb, he

⁷⁷ Robert Cribb and Colin Brown, *Modern Indonesia: A History Since 1945* (London: Longman Group Ltd., 1995), 87.

⁷⁸ "Undang-Undang No. 31 Tahun 1964 tentang Ketentuan-Ketentuan Pokok Tenaga Atom, Presiden Republik Indonesia" (Law number 31 for 1964 regarding the Stipulations for Atomic Energy Principles, President of the Republic of Indonesia), para. 1, art. 5, chpt. 2, in *Sepuluh Tahun Tenaga Atom di Indonesia, 5 Desember 1958-5 Desember 1968* (Ten Years of Atomic Energy in Indonesia, 5 December 1958-5 December 1968) (Jakarta: Indonesian Atomic Energy Agency, 1968), A1.4.

supported Indonesia's nuclear efforts as a means of waging a new revolutionary struggle.

Moreover, before Sukarno openly supported nuclear weapons, he demonstrated his belief in the growing importance of Indonesia's nuclear endeavors by upgrading the LTA to the level of a government department.⁷⁹ In March 1965, the LTA was reorganized and renamed the National Atomic Energy Agency (or BATAN, Badan Tenaga Atom Nasional).⁸⁰ Dr. G.A. Siwabessy, the director of the former LTA, remained in charge of BATAN and was promoted to the rank of cabinet minister.⁸¹

Eight months after General Hartono began boasting, Sukarno finally declared his support for an Indonesian atom bomb to the world. During a speech to a Muslim movement congress held in Bandung on July 24, 1965, Sukarno announced that "God willing, Indonesia will shortly produce its own atom bomb."⁸² Sukarno claimed that the bomb would not be used to commit aggression against any nation or country, but instead would serve to "guard our sovereignty, guard our homeland."⁸³ He stressed that it was not Indonesia's intention to act aggressively toward any nation, thereby disavowing the non-defensive use of the bomb in Indonesia's revolutionary struggle with the West.

⁷⁹ Poneman, 186.

⁸⁰ *Sepuluh Tahun Tenaga Atom di Indonesia*, A5.4.

⁸¹ Poneman, 187.

⁸² Sukarno, "Amanat PJM Presiden Sukarno pada Kongres Muhammadiyah di Bandung, 24 Djuli 1965" (speech to the Muhammadiyah Congress in Bandung, 24 July 1965), in *Sukarno: Selected Speeches 1958-1966*, collection of Professor Angus McIntyre, LaTrobe University, Bundoora Campus, Australia.

⁸³ Ibid.

However, if Indonesia's independence was threatened by another nation, Sukarno asserted that "we are obligated to defend our homeland."⁸⁴

Sukarno's words encouraged Hartono to speak even more avidly in favor of the bomb and prompted other high-ranking Indonesian officials to join in a chorus of support. Hartono reiterated that Indonesia would test an atom bomb soon—possibly after the Asian-African Conference scheduled for October in Algiers.⁸⁵ The Speaker of the Indonesian Parliament, Arudji Kartawinata, stated that the explosion of an Indonesian atom bomb was certain to be welcomed by the Indonesian people.⁸⁶ Even Foreign Minister Dr. Subandrio, who seven years earlier had disavowed any interest in nuclear weapons, voiced his support by asserting that "we have no objections that all nations and countries in the world have atomic and nuclear weapons."⁸⁷

This pro-bomb rhetoric in Jakarta gained special attention from neighboring Malaysia and the Philippines that were concerned Indonesia aspired to become a regional hegemon. The U.S. government sought to alleviate these fears by continuing to make public assurances that Indonesia could not produce its own nuclear weapon. However, confidentially, the U.S. Department of State was investigating two other paths that Sukarno might secretly follow to become a nuclear weapons state. American officials were beginning to take Sukarno's nuclear aspirations seriously, not because they believed he could build atomic

⁸⁴ Ibid.

⁸⁵ *Angkatan Bersendjata* (Jakarta), 28 July 1965.

⁸⁶ Ibid., 10 August 1965.

weapons indigenously, but because they believed he might gain access to nuclear weapons through a third party.

5. The Chinese Connection

In light of the new cooperation between Peking and Jakarta, some diplomats speculated that China, in order to cement its political relationship with Indonesia, might conduct a nuclear test in the Indonesian archipelago and allow the Indonesians to take credit for it.⁸⁸ This speculation can be seen in a secret telegram dated July 29 sent from the U.S. embassy in Jakarta that acknowledges that American diplomats were evaluating the "... possibility [of] Chicoms [Chinese Communists] exploding atomic device on Indo territory"⁸⁹ On October 1, U.S. Secretary of State Dean Rusk brought this concern to the attention of Soviet Foreign Minister Andrei Gromyko during a dinner meeting at the United Nations. According to a memorandum of this conversation, Rusk told Gromyko that "he did not believe Indonesia had any nuclear capability; if an explosion did occur in that area, we must conclude that it was of Chinese origin."⁹⁰ Furthermore, Rusk emphasized that "he did think it possible that the Chinese would detonate a nuclear bomb in Indonesia."⁹¹

⁸⁷ *Antara Home News* (Jakarta), 4 August 1965.

⁸⁸ Taylor, 105.

⁸⁹ Department of State, "Incoming Telegram from American Embassy Jakarta," 29 July 1965, *LBJ National Security Files, Asia & the Pacific: 1963-1969*, Indonesia Cables on microfilm, reel 7, frame 0784.

⁹⁰ Department of State, "Memorandum of Conversation during USSR Foreign Minister Gromyko's Dinner for Secretary Rusk," 1 October 1965, *Foreign Relations of the United States, 1964-1968*, vol. XI, 250.

⁹¹ *Ibid.*

Evidently, the international news media reached the same conclusion as American officials because the idea of a Chinese connection was reported widely during the months of August and September 1965. In Britain, *The Sunday Times* reported that China was preparing an undersea nuclear explosion off the coast of the Indonesian province of West Irian on the island of New Guinea.⁹² In the Philippines, the *Manila Daily Bulletin* reported that the next logical step for the PRC's nuclear weapons program was to conduct a marine test and that possibly, "Communist China may be helping Sukarno get the last laugh."⁹³ In the United States, *The New York Times* reported that "Peking might set off a nuclear blast on one of Indonesia's 3000 islands but retain complete control of the test and the resources employed."⁹⁴ Even the official Indonesian news agency Antara acknowledged the idea by reporting on Filipino speculation about an atomic blast. Antara reported that the Philippine Provincial Constabulary Intelligence expected the Chinese to explode an atom bomb underwater near West Irian.⁹⁵

6. The French Connection

While the possibility that the PRC might assist Indonesia to become a nuclear weapons state was widely known, the possibility that Indonesia could go to the French for nuclear assistance was kept secret by the U.S. government.⁹⁶

⁹² *The Sunday Times* (London), 12 September 1965.

⁹³ *Manila Daily Bulletin*, 25 August 1965.

⁹⁴ *The New York Times*, 25 August 1965.

⁹⁵ *Antara Home News* (Jakarta), 11 September 1965.

⁹⁶ My conclusion that the U.S. government kept this connection secret is based on the lack of any news reports about a possible French-Indonesian link.

On August 3, the American defense attaché in Jakarta made the following classified report to the Defense Intelligence Agency in Washington:

ARMA [army attaché] advised evening 2 Aug by extremely reliable source that Brig Gen Sabur, CG [commanding general] palace guard and person closest to Sukarno, left Jakarta morning 2 Aug for Paris on order [from] Sukarno to procure atomic bomb or device for Indos from French. According to source French already indicated to Sukarno willingness [to] sell bomb or device for eight hundred thousand dollars. Source [is] close friend of Sabur who told source purpose of trip.⁹⁷

The attaché continued by speculating that Sabur might have fabricated the story, but stressed that the American government "cannot overlook capabilities and present feelings toward U.S. [by] that other great leader, de Gaulle."⁹⁸ The report was forwarded to Assistant Secretary of State for Far Eastern Affairs William Bundy who scribbled in the margin the ironic comment, "A Bargain!"⁹⁹ For Bundy, this report may have been hard to believe, but it provides further evidence of U.S. concerns that Indonesia would try to procure the bomb by the end of the year.

In truth, it was not unreasonable for American officials to believe that France might be open to this idea. During the late 1950s and early 1960s, the French government provided assistance to Israel in developing a nuclear reactor

⁹⁷ Department of Defense, "National Military Command Center Message," 3 August 1965, *LBJ National Security Files, Asia & the Pacific: 1963-1969*, Indonesia Cables on microfilm, reel 7, frame 0869.

⁹⁸ Ibid.

⁹⁹ Ibid.

at Dimona that became the center of the Israeli nuclear weapons program.¹⁰⁰ At the same time, the French government allowed a French firm to provide Israel with blueprints for a reprocessing plant to separate plutonium from spent reactor fuel.¹⁰¹ Moreover, the French President, General de Gaulle, was known to view nuclear weapons as a political tool to gain international power and influence.¹⁰² As such, de Gaulle might consider providing Indonesia with a bomb if he thought it was in France's political interest.

Furthermore, it was not unreasonable for Americans to believe that Indonesia might attempt to procure a bomb from a nuclear weapons state. During this same period, the United States and Britain seriously considered requests for nuclear weapons from nonnuclear states. In the United States, both the Eisenhower and Kennedy administrations debated a West German request to share nuclear weapons.¹⁰³ In Great Britain, Prime Minister Macmillan's government considered providing Indonesia's neighbor, Australia, with access to nuclear weapons.¹⁰⁴ Thus, the idea that Indonesia might attempt to buy a bomb from France would not have been surprising to American officials.

Assuming that the report about Sukarno's French connection was true, the deal must have been rejected quickly by de Gaulle. One can only speculate

¹⁰⁰ Mitchell Reiss, *Without the Bomb: The Politics of Nuclear Nonproliferation* (New York: Columbia University Press, 1988), 147.

¹⁰¹ *Ibid.*, 149.

¹⁰² Lawrence Freeman, *The Evolution of Nuclear Strategy* (New York: St. Martin's Press, 1997), 321.

¹⁰³ Marc Trachtenberg, *History and Strategy* (Princeton, New Jersey: Princeton University Press, 1991), 186-187.

what de Gaulle told the Indonesian envoy when he asked for the bomb. Perhaps the French decided not to risk their relations with the United States, perhaps they wanted more money, or perhaps they were simply unwilling to transfer atomic weapons.

7. The Plan's Demise

Even without France's support, the plan to acquire an atom bomb from the PRC must have still seemed promising to Sukarno in late August. On August 24, Sukarno told a group of Japanese journalists that "Indonesia's preparations to explode its first atom bomb are progressing smoothly without being affected by international events."¹⁰⁵ In early September, Sukarno was probably encouraged by a U.S. government decision to continue peaceful nuclear assistance to Indonesia despite the government's aspirations for nuclear weapons.¹⁰⁶ By the end of September, however, Sukarno's public boasts about the bomb would cease.

Sukarno's hope that China might test a nuclear weapon in Indonesian waters diminished on September 29 when PRC Foreign Minister Chen Yi stated in a press conference that "as for the request for China's help in the manufacture

¹⁰⁴ Jim Walsh, "Surprise Down Under: The Secret History of Australia's Nuclear Ambitions," *The Nonproliferation Review* 5, no. 1 (1997): 4.

¹⁰⁵ *Antara Home News* (Jakarta), 24 August 1965.

¹⁰⁶ *The New York Times*, 9 September 1965. For obvious reasons, the Johnson administration was reluctant to extend the original five-year agreement for cooperation in atomic energy with Indonesia that was set to expire in September 1965. According to *The New York Times*, the administration was "persuaded to continue the cooperation basically by the argument that there was no way to end the program without the Indonesians taking full control of it."

of atom bombs, this question is not realistic."¹⁰⁷ Instead, Chen expressed hope that African and Asian nations would develop their own nuclear weapons on a "do it yourself" basis.¹⁰⁸ The U.S. Central Intelligence Agency interpreted Chen's comments as designed to "parry pressure from Jakarta for assistance in developing an Indonesian nuclear capability, or for a Chinese-supplied nuclear device to be exploded on Indonesian soil."¹⁰⁹

Indonesia's aspirations to become a nuclear weapons state ended on October 1, 1965. On this day, a group of dissident Indonesian Army and Air Force officers, along with members of the Indonesian Communist Party (or PKI, Partai Komunis Indonesia), abducted and murdered six senior Army generals, including the top Army commander.¹¹⁰ The officers and PKI members announced themselves on local radio as the "September 30 Movement" and claimed that their purpose was to save President Sukarno and the Republic of Indonesia from a coup by the generals.¹¹¹ Within two days, however, Major General Suharto, commander of Indonesian Armed Forces' strategic reserve,

¹⁰⁷ Taylor, 107.

¹⁰⁸ Central Intelligence Agency, "Intelligence Memorandum, Chen Yi's Press Conference," 1 October 1965, *LBJ National Security Files, First Supplement, Asia & the Pacific: 1963-1969*, Indonesia Cables on microfilm, reel 3, frame 0516.

¹⁰⁹ Ibid.

¹¹⁰ Michael Leifer, *Indonesia's Foreign Policy* (London: George Allen & Unwin, 1983), 106. There are several interpretations of the aborted coup of October 1, 1965. One theory is that the coup was an internal military affair and did not involve the PKI. For this view, see Benedict Anderson and Ruth McVey, *A Preliminary Analysis of the October 1, 1965 Coup in Indonesia* (Ithaca, New York: Cornell University Modern Indonesia Project, 1971). Another theory identifies PKI leaders as the masterminds behind the coup. For this view, see Paul F. Gardner, *Shared Hopes, Separate Fears: Fifty Years of U.S.-Indonesian Relations* (Boulder, Colorado: Westview Press, 1997): 213-219. The most neutral account of the coup is found in Harold Crouch, *The Army and Politics in Indonesia* (Ithaca, New York: Cornell University Press, 1988): 97-134.

¹¹¹ Gardner, 213.

assumed command of the Army and suppressed the September 30 Movement.¹¹² The subsequent backlash against the PKI resulted in the massacre of approximately 500,000 Indonesian Communists and Indonesians suspected of being Communists.¹¹³

The aborted coup also discredited Sukarno and ended the possibility of an Indonesian atom bomb. On March 11, 1966, Sukarno was forced to transfer presidential power to General Suharto.¹¹⁴ The idea of an Indonesian bomb had been so closely tied to Sukarno and his vision of a new Indonesian revolution, that there was no real chance that Indonesia's new leader would pursue nuclear weapons. In 1967, the Suharto government formally agreed to international safeguards of sensitive nuclear materials and equipment received from the United States, thereby eliminating any suspicion that it still intended to become a nuclear weapons state.¹¹⁵

B. EXPLANATIONS

1. Security

Realism helps to explain Sukarno's pursuit of the bomb by focusing on external threats to security. At the same time that Indonesia was flirting with nuclear weapons, Sukarno perceived two moves by Western powers in Southeast Asia as potentially dangerous to his country's security: Britain's

¹¹² Leifer, 106.

¹¹³ Cribb and Brown, 106.

¹¹⁴ William H. Frederick and Robert L. Worden, ed., *Indonesia: A Country Study* (Washington, D.C.: U.S. Government Printing Office, 1993), 57.

ongoing support for the Federation of Malaysia and U.S. deployment of combat troops to Vietnam. These threats are necessary, but not sufficient by themselves, to explain the Indonesian proliferation decision.

Sukarno viewed the formation of the Federation of Malaysia on September 16, 1963, as a threat to his vision of an Indonesian socialist revolution against colonialism, neocolonialism, and imperialism.¹¹⁵ The federation was formed when Malaya, independent from the British since 1957, merged with the former British colonies of Singapore, Sabah, Sarawak, and Brunei.¹¹⁷ The latter three colonies occupied the western and northern fringes of the island of Borneo while the Indonesian province of Kalimantan occupied the southern two-thirds of Borneo. The British, who encouraged the union, believed this realignment would be in Indonesia's interest since it was in essence an effort to de-colonize the area.¹¹⁸ Sukarno, however, reached the opposite conclusion and chose to view the proposal as a neocolonialist plot to "surround" Indonesia.¹¹⁹ Specifically, Indonesia claimed that the federation was a "British project" designed to create a "puppet state" to perpetuate neocolonialism in the region.¹²⁰

¹¹⁵ Poneman, 186. On June 19, 1967, Indonesian Ambassador to Austria and the IAEA, Director General Eklund, and U.S. Ambassador Henry D. Smyth signed an IAEA safeguard agreement.

¹¹⁶ Frederick and Worden, 53. Sukarno viewed the international arena as a revolutionary struggle between the "new emerging forces (or NEFOS)," such as Indonesia, and the "old established forces (or OLDEFOS)," such as the United States and Great Britain.

¹¹⁷ Cribb and Brown, 86.

¹¹⁸ Gardner, 179.

¹¹⁹ Ibid., 180.

¹²⁰ Crouch, 57.

In late 1963, Sukarno declared his intent to "Crush Malaysia" and initiated an undeclared war dubbed the "Konfrontasi" (Confrontation) against the British and Malaysian troops in Borneo. Sukarno intended the Konfrontasi to support his goals of driving the United Kingdom from Southeast Asia and eliminating the neocolonialist threat to Indonesia.¹²¹ The Konfrontasi continued for three years and was ongoing during the period Indonesia sought the bomb.

Not surprisingly, Sukarno also perceived America's increased involvement in Vietnam as a threat to his country's security. The United States escalated its intervention in Southeast Asia in early 1965 when President Johnson, responding to the continuing communist threat in Vietnam, committed conventional military forces on an open-ended basis. On February 25, Johnson approved the deployment of two battalions of U.S. Marines to South Vietnam.¹²² At the same time, Johnson ordered sustained bombing attacks on North Vietnam in "Operation Rolling Thunder."¹²³ By March, the United States was committed to a large, conventional war in Southeast Asia. According to Jay Taylor, America's troop deployment and bombing offensive in Vietnam "had a major, if negative, effect on the momentous events in Indonesia."¹²⁴ Among Indonesians, the war supported the belief that U.S. imperialism was their principal enemy.¹²⁵ For his

¹²¹ Taylor, 83.

¹²² Ralph B. Smith, *An International History of the Vietnam War: Volume II, The Struggle for South-East Asia, 1961-65* (New York: St. Martin's Press, 1985), 375.

¹²³ Ibid., 374.

¹²⁴ Taylor, 119.

¹²⁵ Smith, 313.

part, Sukarno viewed the Americans as a threat to Indonesia's alignment with the PRC and a danger to the hope for a new Indonesian revolution.¹²⁶

Despite British and American assurances that they were not threats to Indonesia's security, Sukarno continued to view the Western powers as menaces throughout the mid-1960s. But did these perceived threats influence his proliferation decision? More importantly, is there a correlation between the emergence of these threats and Sukarno's decision to pursue nuclear weapons? The main evidence in support of an affirmative answer to these questions comes from public comments made by Sukarno on the potential uses of the bomb. For example, on the day that Sukarno first publicly supported an Indonesian nuclear capability in July 1965, he stated that the atom bomb would be used if Indonesia were attacked.¹²⁷ Later that summer, Sukarno sent a message to delegates at the World Conference against Atom and Hydrogen Bombs being held in Tokyo that characterized the American and British nuclear capabilities as a threat to Indonesia's security. Sukarno argued that "nuclear arms in the hands of the new emerging forces are to safeguard peace and liberty, whereas nuclear weapons in the hands of imperialists are to cause disaster and domination."¹²⁸ According to Sukarno, the people of the new emerging forces "have to strengthen their defense with atomic weapons."¹²⁹ These statements suggest that Indonesia's

¹²⁶ Taylor, 118-119.

¹²⁷ *Antara Home News* (Jakarta), 24 July 1965.

¹²⁸ *Ibid.*, 2 August 1965.

¹²⁹ Department of State, 29 July 1965.

proliferation decision was, in part, a response to perceived threats from the British and the Americans.

However, there is also evidence to counter the notion that Sukarno seriously believed that Britain and the United States presented imminent danger to Indonesia's security. For example, during the same period that Sukarno sought to label the Western powers as threats, the British were removing their military forces "East of the Suez" and the Americans were providing nuclear energy assistance to Indonesia under the Atoms for Peace program. From a Western viewpoint, it appears that Sukarno was greatly exaggerating the threat his country faced from Britain and the United States.

Even if Sukarno's fears were false or disproportionate, many Indonesians probably agreed that their country's security was at risk from the West. Not only were Indonesians witnessing American and British military intervention in Vietnam and Borneo during the mid-1960s, but many Indonesians had also observed firsthand the U.S. attempt to subvert their government during the late 1950s.¹³⁰ In this context, Indonesia's proliferation decision supports the realist theory that states build nuclear weapons because of external threats to their security. Indonesia's actions during the mid-1960s fulfill Thayer's prediction that

¹³⁰ See Audrey R. and George McT. Kahin, *Subversion as Foreign Policy* (New York: The New Press, 1995). The Kahins provide an excellent account of American involvement in an Indonesian military attempt to overthrow the Sukarno government during the late 1950s. Military commanders from Indonesia's outer islands started the rebellion because they were dissatisfied with the Java-based government's increasing control of the military. The United States covertly supported the outer island commanders in an effort to replace and transform Indonesia's political leadership. The unsuccessful plot resulted in a civil war and led to over 10,000 casualties on the government side and 22,000 casualties on the rebel side.

states in the international system will be fearful and hesitant, will behave in a "self-help manner," and will act to maximize their military power relative to other states. Acting out of fear, Sukarno sought the bomb to deter the conventional threat posed by U.S. and British expeditionary forces in the region.

2. Domestic Politics and Norms

According to Sukarno's public statements, the threat to Indonesia's security was sufficient reason for his country to acquire the bomb. However, given the intense struggles in Indonesian domestic politics during the mid-1960s, it seems likely that Sukarno's pursuit of the bomb served domestic purposes as well.¹³¹ Specifically, there is circumstantial evidence that Sukarno used the prestige of nuclear weapons to help in maintaining the support of the Indonesian Armed Forces (known as ABRI, Angkatan Bersenjata Republik Indonesia) and to increase domestic stability. As such, Sagan's domestic politics model would suggest that Sukarno's proliferation decision was made to fulfill his own political agenda, while Sagan's norms model would highlight the role prestige played in his effort to use the bomb as a domestic political tool.

For Sukarno, maintaining military support for his regime was crucial since ABRI posed the only real domestic threat to his planned Indonesian socialist revolution. By 1965, however, Sukarno was rapidly losing the support of Indonesia's military leaders. Many top officers bitterly opposed Sukarno's increasingly pro-China stance as well as his tacit support for the creation of a

¹³¹ Taylor, 107.

"Fifth Force."¹³² The Fifth Force was a proposal by PKI leaders to create a formal group of armed peasants and workers to augment ABRI's existing four branches: the Army, Navy, Air Force, and the Police.¹³³ Leaders in ABRI viewed this proposal as an effort to neutralize their power and pressed Sukarno to quash the idea immediately.¹³⁴ Sukarno, however, exacerbated the military's dissatisfaction by gradually accepting the idea as the year progressed.¹³⁵

By the middle of 1965, the Fifth Force had become the focus of a bitter debate between Sukarno and the PKI on one side, and ABRI's conservative leaders on the other. Sukarno's full acceptance of the Fifth Force idea in August created a dangerous rift between himself and ABRI.¹³⁶ Interestingly, during this same period, Sukarno stepped up his public support for nuclear weapons. In light of these circumstances, Jay Taylor makes the following suggestion:

Sukarno may have held out the prospect of a Chinese-provided nuclear explosion and the consequent enhancement of army and air force prestige as a device to dislodge the generals from their strong opposition both to the PKI Fifth Force and to the alliance with China.¹³⁷

Taylor suggests that Sukarno exploited the possibility of acquiring the bomb to garner support for his agenda from ABRI leaders. Taylor's analysis is persuasive, and thus norms also played a role in the decision to pursue the

¹³² Frederick and Worden, 54.

¹³³ Ibid.

¹³⁴ Taylor, 111.

¹³⁵ Ibid., 112.

¹³⁶ Ibid., 114.

¹³⁷ Ibid., 107.

bomb. Sukarno estimated that his military leaders believed possession of nuclear weapons would enhance their prestige.

Sukarno may also have leveraged the prestige of nuclear weapons to sustain the stability of his country. Stability has always been fundamental to the Indonesian government because of the size and diversity of the nation. Indonesia is the world's fourth most populous nation and includes four major ethnic groups, four major religions, and sixteen major languages.¹³⁸ Indonesia's population includes the world's largest number of Muslims in one country and a financially strong non-Muslim, Chinese minority, while its territory encompasses thousands of islands spread throughout the southwest Pacific Rim.¹³⁹ Without political stability, maintaining the unity of such a large and diverse nation would be difficult at best.

One of Sukarno's solutions to the problem of maintaining stability at home was to rally the people behind the promise of regional leadership. This promise was appealing because there was a strong desire among Indonesians for a regional role inspired by their successful 1945-1949 revolution for independence from the Dutch and derived from their sense of geographic importance. According to Michael Leifer,

¹³⁸ Frederick and Worden, xxx.

¹³⁹ Ibid.

... a consciousness of vast territorial scale, an immense population, extensive natural resources, as well as a strategic location, produced the conviction that Indonesia was entitled to play a leading role in the management of regional order within South-East Asia.¹⁴⁰

To fulfill this promise, Sukarno had to provide his people with evidence that he would make Indonesia the regional power they hoped for. As such, his proliferation decision may have been part of his plan to foster the belief that Indonesia would become a regional power. This view is supported by the observations of American diplomats, who noted that "there does seem little doubt that Indo political [leaders and the] public likes to hear about [the] great military power they are supposedly developing and evidently many are beginning to believe it."¹⁴¹ Evidently, Sukarno sought to focus public attention on the prestige of nuclear weapons, associate such plans with his leadership, and thereby fulfill his own political interest in improving domestic stability. Thus, the Indonesian case cannot be fully explained without accounting for the important influence of domestic politics and norms on Sukarno.

3. Technology

Curiously, Indonesia's pursuit of the bomb begins only *after* it possessed operational nuclear technology. Is this simply a coincidence, or did the acquisition of nuclear technology influence Indonesian leaders to pursue nuclear weapons? While there is no proof that the LTA, and later BATAN, was driven by

¹⁴⁰ Leifer, xiv.

¹⁴¹ Department of State, 29 July 1965.

a technological imperative to build the bomb, there are indications that technology influenced Indonesian nuclear decisions in the manner described by Stephen Meyer in *The Dynamics of Nuclear Proliferation*.

When President Sukarno announced his intention to explode an Indonesian atom bomb, the only functioning nuclear technology his country possessed was the TRIGA-Mark II reactor. Indonesia had signed a nuclear cooperation agreement with the Soviet Union in 1960; however, construction of a Soviet-sponsored reactor in Yogyakarta did not begin until 1965.¹⁴² Even though both Indonesia and the United States knew that the TRIGA-Mark II was insufficient to produce fissile material for a nuclear weapon, technology played at least two roles in Indonesia's nuclear decisions.

First, the technology received through the Atoms for Peace program increased international doubts about Indonesia's actual nuclear capabilities. The fact that the TRIGA-Mark II achieved criticality just one month prior to General Hartono's initial atom bomb announcement made Indonesia's nuclear plans more believable, even in the United States. The U.S. Department of State was sensitive to the connection that was being made between the newly operational reactor and Indonesia's announced intent to explode an atom bomb. For instance, a telegram sent by the Department of State to the Jakarta Embassy stated the following in reference to the dedication ceremony for the TRIGA-Mark II scheduled to occur in early 1965:

¹⁴² Poneman, 185.

We [are] concerned over possible repercussions [from the] scheduled February 8 reactor dedication ceremony and concurrent turnover dollar check for US contribution [to the Indonesian nuclear program] to Indo embassy Washington. Last October's announcement that reactor had achieved criticality followed by Indo boast that nuclear weapons in sight sparked some adverse public and congressional comment here. Interest died down following Dept statements stressing harmless nature [of the] reactor and facts [of the] US commitment, but there remains public concern.¹⁴³

Considering Sukarno's public announcements of support for an atom bomb during 1965, it seems likely that he knew that this connection was being made by outside observers. In fact, *The Straits Times* in Singapore reported that U.S. Congressman, Representative William S. Broomfield (Republican, Michigan), protested American cash assistance for Indonesia's nuclear research while Sukarno was simultaneously threatening his neighbors.¹⁴⁴ Thus, even though Atoms for Peace technology did not provide Sukarno the ability to produce a nuclear weapon, it did create the impression that his country *might* be able to do so. This provided some encouragement to Sukarno and his leaders to announce their nuclear aspirations to the world.

Second, Atoms for Peace technology discouraged Indonesia from attempting to build an indigenous atom bomb by revealing the difficulties inherent in nuclear engineering. Building the TRIGA-Mark II proved to be more difficult than anticipated. Originally, the reactor was scheduled to go critical by

¹⁴³ Department of State, "Outgoing Telegram from Department of State," 29 January 1965, *LBJ National Security Files, Asia & the Pacific: 1963-1969*, Indonesia Cables on microfilm, reel 7, frame 0354.

¹⁴⁴ *The Straits Times* (Singapore), 5 August 1965.

the end of 1961; however, it did not become operational until three years later.¹⁴⁵ Thus, as public fervor grew over the possibility of an Indonesian bomb, the government increasingly realized that the only way it could demonstrate such a capability was through the aid of a third party nuclear weapons state. In this sense, the limited technology transfer from the United States educated Indonesia's leaders enough to realize that they could not master the atom bomb themselves. However, it certainly did not discourage them from attempting to procure a nuclear weapon from the Chinese or the French.

Thus, in Indonesia, even limited nuclear technology encouraged a proliferation decision, albeit not according to traditional conceptions. Opening the Indonesian "black box," as Flank recommends, it becomes apparent that the transfer of technology bolstered Sukarno's nuclear aspirations by making the idea of an Indonesian bomb plausible to outside parties and by directing the government to an outside source for nuclear weapons assistance.¹⁴⁶

¹⁴⁵ "Indonesia," *Nuclear Power* 6, no. 57 (1961): 69.

¹⁴⁶ Flank, 263.

IV. COUNTERFACTUAL HISTORY

What if the coup attempt on September 30, 1965, had succeeded?

Would Indonesia have become a nuclear weapons state or would it have restrained from doing so? This thesis argues that even if the coup attempt had been successful, Sukarno and his government leaders would likely have abandoned their nuclear aspirations. The factors that would have compelled Indonesia to exercise nuclear restraint under Sukarno's continuing leadership have implications for at least two explanations for the proliferation puzzle, security and domestic politics, and strengthen the argument that a multicausal approach is best suited to explaining the process of proliferation.

A. IF THE COUP HAD SUCCEEDED

According to Jay Taylor, "had the September 30 movement succeeded, the effect on the world scene would have been serious."¹⁴⁷ Taylor suggests that if the coup attempt succeeded and Sukarno remained in power, "events in Indonesia might have paralleled events in Cuba, particularly in foreign policy."¹⁴⁸ In other words, Indonesia would likely have become a socialist state allied with China and the Soviet Union and against the United States.

Indonesia's relations with China would almost certainly have continued to strengthen the Peking-Jakarta Axis. In fact, on the day of the coup attempt, an Indonesian parliamentary delegation was in Peking to celebrate the PRC's

¹⁴⁷ Taylor, 119.

sixteenth anniversary and to sign seven different cooperation agreements with the Chinese on trade and technical matters.¹⁴⁹ Sukarno would have continued such cooperation with the PRC beyond 1965, not with the intention of becoming a satellite of China, but with the goal of becoming an equal partner with China in the international revolutionary struggle.¹⁵⁰ Indonesia's relations with the Soviet Union would also have continued to strengthen due in large part its outstanding debts to the Soviets for military aid.¹⁵¹ However, an Indonesian government firmly in the communist bloc would have alienated the United States as it struggled to fight communism in Indonesia's neighbor, Vietnam.

But why would Sukarno have abandoned Indonesia's nuclear pursuit? Two factors in a hypothetical post-1965 Indonesia under Sukarno's control would have persuaded him to abandon the bomb. First, Sukarno's relationship with the world's Communist camp would have improved Indonesia's security. Second, Indonesia's reconfigured domestic situation would have eliminated the need to pursue the bomb for domestic political reasons.

B. EXPLANATIONS

1. Security

The continuation of Sukarno's regime beyond 1965 would have greatly influenced Indonesia's nuclear plans and supported Frankel's neorealist belief that there is a "causal relationship between the structure of the international

¹⁴⁸ Ibid.

¹⁴⁹ Ibid., 82

¹⁵⁰ Ibid., 121.

system and the spread of nuclear weapons."¹⁵² In the aftermath of a successful coup, Indonesia would likely have joined a large international grouping with Peking as its center.¹⁵³ At the same time, Indonesia would have stayed close to the Soviet Union to continue the flow of military aid. Closer ties between Indonesia and the PRC and the Soviet Union would have persuaded Sukarno and his government leaders to abandon their nuclear aspirations.

Sukarno's decision in favor of nuclear restraint would have been influenced by an implicit commitment from either of the Communist powers to ensure Indonesia's security from Western threats in Southeast Asia. Taylor indicates that the Chinese may have been inclined to make such a commitment to Sukarno because they viewed Indonesia as the cornerstone of a Peking-centered, anti-imperialist Asian front arrayed against the United States.¹⁵⁴ In terms of neorealist theory, Indonesia would have left the ranks of the world's nonaligned nations and joined the Communist side of the bipolar world. This change in the structure of international relations in Southeast Asia would have lessened Indonesia's security needs and led to a decision by Sukarno to abandon pursuit of the bomb. Thus, security is an important variable that could lead to Indonesian nuclear restraint in an alternative history. However, domestic politics is another variable necessary to explain why Sukarno would have abandoned his nuclear plans.

¹⁵¹ Ibid., 120.

¹⁵² Frankel, 37.

¹⁵³ Taylor, 122.

¹⁵⁴ Ibid., 53.

2. Domestic Politics

Assuming that Indonesia would not require nuclear weapons to ensure its security in a post-coup scenario, Sukarno would have also determined that he no longer needed to exploit the prestige of nuclear weapons to garner support for his domestic political agenda. Prior to the coup, Sukarno promoted the idea that all great powers must have nuclear weapons to convince ABRI leaders, as well as the Indonesian people, that his pursuit of the bomb was important and a source of national pride. However, following a successful coup, Sukarno would have had no need for the bomb's prestige to achieve his political goals of controlling ABRI and maintaining domestic stability.

If the coup had succeeded, Sukarno would have gained effective control over the military. As such, Sukarno would no longer have needed to offer the bomb as a "carrot" to gain the support of ABRI leaders. Instead, Sukarno could use his own revitalized power, as well as that of the PKI, as a "stick" to force ABRI's leaders into compliance with his leadership.

Moreover, the bomb idea would have had little impact on the Indonesian people in a successful post-coup era. By 1966, most Indonesians faced widespread economic problems that far out-weighed their pride in Indonesia's potential nuclear prowess. As a result, Sukarno would not have pursued an elusive bomb as a means of rallying Indonesians; instead, he would likely have made more feasible economic development his domestic political priority to maintain stability at home. The Indian and Pakistani cases may raise doubts

about this conclusion; however, proliferation decisions in those countries were influenced by different domestic factors than those that would have influenced an Indonesian decision had Sukarno remained as president.

Thus, the norm allocating prestige to the possession of nuclear weapons would no longer have been useful to Sukarno's as a domestic political tool. Instead, the redefined political scene resulting from a successful coup would have led Sukarno to use other tools to achieve his domestic political agenda. Just as several factors are necessary to sufficiently explain Sukarno's proliferation decision, at least two types of variables are needed to account for Indonesian nuclear restraint in a counterfactual story line. This conclusion bolsters the claim that multicausal analysis is necessary to explain the spread of nuclear weapons.

V. CONCLUSION

A. PROLIFERATION THEORIES AND THE INDONESIAN CASE

Most scholars of nuclear proliferation overlook Indonesia's little-known aspirations for the bomb during the mid-1960s. Instead, scholars usually investigate well-known cases of proliferation that tend to confirm their respective theories why nuclear weapons spread. The Indonesian case is important to the proliferation puzzle debate because it suggests that no single variable is sufficient to explain the spread of nuclear weapons. Specifically, it is clear that in the case of Indonesia, a combination of several variables—security, domestic politics, norms, and technology—is necessary to explain why Sukarno and his leaders made the decision to pursue the bomb during 1964-1965. Moreover, this thesis asserts that the influence of two variables—security and domestic politics—is necessary to explain why Sukarno would have abandoned his nuclear plans had the October 1, 1965, coup succeeded. This case suggests that multiple variables may be necessary to explain the spread of nuclear weapons in other cases.

Two scholars of nuclear proliferation, Scott Sagan and Tanya Ogilvie-White, offer useful guidance in explaining Sukarno's aspirations to acquire the bomb. They argue that each case of proliferation is different from the next and that a variety of factors, both external and internal, can affect a state's proliferation decision. In the case of Indonesia, the primary external variable

affecting Sukarno's decision was the perceived threat to Indonesia's security from the West. Sukarno viewed British support for the new Federation of Malaysia and American involvement in Vietnam as neocolonialist efforts to lay siege to Indonesia. This thesis lays out an alternative history in which Sukarno remains in power beyond 1965, to estimate whether this external variable would still be important. In such a scenario, security remains an important factor in Sukarno's nuclear decisions. An improved security position through membership in the international Communist camp would have almost certainly led Sukarno to abandon his efforts to acquire the bomb.

The main internal variables that affected Sukarno's decision were domestic politics, norms, and technology. The mid-1960s were a turbulent period in Indonesia's history and Sukarno leveraged the idea of an Indonesian bomb to sway the tide of domestic events in his favor. American nuclear technology transferred to Indonesia under the Atoms for Peace program bolstered Sukarno's nuclear aspirations by making the idea of an Indonesian bomb plausible to outside parties and by directing the government to an outside source for nuclear weapons assistance. But had Sukarno secured the domestic front, different domestic political considerations would probably have led him to abandon this pursuit.

B. IMPLICATIONS FOR U.S. NONPROLIFERATION POLICY

During the early 1960s, the Atoms for Peace program was the core of America's international nuclear nonproliferation effort. However, Indonesia's

announcement that it intended to acquire an atom bomb caused many leaders in the U.S. government to question the wisdom of a nonproliferation policy based on supplying developing countries with nuclear technology. Representative William S. Broomfield (Republican, Michigan) led U.S. criticism against nuclear assistance to Indonesia, and in 1965, attempted to prevent the Johnson administration from extending Atoms for Peace assistance beyond the original five-year agreement. Broomfield argued that U.S. provision of monetary aid for construction of the Bandung research reactor encouraged Sukarno's aggressive behavior in Indonesia's foreign relations.¹⁵⁵ Similarly, officials in the Johnson administration, according to *The New York Times*, were concerned that "in extending the [Atoms for Peace] agreement the United States could seem to place itself in the position of aiding Indonesia in its avowed goal of developing an atomic bomb."¹⁵⁶

Thus, on the surface, it appears that U.S. nonproliferation policy based on the Atoms for Peace program failed in Indonesia because it encouraged the government's aspirations to acquire the bomb. Upon further examination, however, it becomes apparent that Atoms for Peace succeeded as a nonproliferation policy because it permitted the United States to remain engaged with Indonesia and keep apprised of nuclear developments within the country. Hence, the U.S. government was able to make an accurate assessment of Indonesia's indigenous nuclear capability and determine that the government

¹⁵⁵ *The Straits Times* (Singapore), 5 August 1965.

could not produce atomic weapons. Subsequently, U.S. officials focused their nonproliferation efforts on thwarting the possibility that China or France might provide Sukarno with nuclear weapons.

Indonesian nuclear aspirations, therefore, demonstrate that U.S. nonproliferation policy under Atoms for Peace could be successful in two ways. First, Atoms for Peace could succeed in its stated purpose of directing the governments of developing countries toward the peaceful uses of nuclear technology and away from proliferation decisions. This was obviously not the case in Indonesia. Second, Atoms for Peace could succeed in those countries that received assistance and still decided to pursue the bomb, such as Indonesia, by permitting the U.S. government access to the potential proliferant country's nuclear establishment. Atoms for Peace may have been ineffective in preventing Sukarno from making a proliferation decision, but it was effective in keeping the United States informed about Indonesian efforts to procure a bomb.

Another implication that the case of Indonesia has for American nonproliferation policy is the recognition that promoting nonproliferation while simultaneously relying on nuclear weapons sometimes produces unintended results. Indonesia, for example, may have been influenced to seek nuclear weapons by American emphasis on the value of nuclear energy and reliance on nuclear weapons. In other words, while the United States sought to offer nuclear energy assistance to deter the Indonesian government from pursuing the bomb,

¹⁵⁶ *The New York Times*, 9 September 1965.

Sukarno and his leaders viewed America's possession of both nuclear energy *and* nuclear weapons as a superior option.

Although the United States may have unintentionally encouraged Sukarno to seek the bomb, refusing American nuclear assistance to Sukarno would likely have increased Indonesian determination to seek nuclear technology from the Soviets or the Chinese. Had this happened, the United States would not only have failed to forestall Sukarno's nuclear aspirations, but also would have had a weaker basis for evaluating Indonesia's indigenous nuclear capabilities. Thus, although imperfect, Atoms for Peace was a better approach to nonproliferation than a policy of outright denial.

APPENDIX. KEY EVENTS

1958	Foreign Minister Dr. Subandrio disavows Indonesia's interest in nuclear weapons
December 5, 1958	Indonesian government creates Institute of Atomic Energy (LTA) to supervise nuclear research and develop atomic energy
June 8, 1960	United States and Indonesia sign agreement to cooperate in the civil uses of atomic energy
September 21, 1960	U.S.-Indonesian agreement becomes effective
April 19, 1961	Construction inaugurated on TRIGA-Mark II research reactor at Bandung
October 7, 1963	Indonesia signs 1963 Nuclear Test Ban Treaty in Moscow
October 16, 1964	China explodes its first atom bomb
October 17, 1964	Indonesia conducts its first nuclear reaction at Bandung research reactor
November 15, 1964	Brigadier General Hartono announces that Indonesia plans to explode an atom bomb during 1965
November 26, 1964	President Sukarno signs law that stipulates Indonesia's use of atomic energy
January 28, 1965	China-Indonesia cooperation agreement initiates the Peking-Jakarta Axis
February 2, 1965	Hartono announces that 200 scientists are conducting tests on the production of an atom bomb; indicates the possibility of an Armed Forces Day surprise on October 5, 1965
March 1965	The LTA is reorganized and renamed the National Atomic Energy Agency (BATAN)

July 24, 1965	Sukarno declares his support for an Indonesian atom bomb; pro-bomb rhetoric in Jakarta increases
August 1965	U.S. Department of State speculates that China is preparing to explode an atom bomb in Indonesian waters and will let Sukarno take credit; international news media reports this possibility
August 3, 1965	U.S. Defense Attaché in Jakarta reports that Sukarno has sent one of his generals to France to buy a bomb
September 8, 1965	Johnson administration decides to continue peaceful nuclear assistance to Indonesia despite Sukarno's express aspirations for the bomb
September 29, 1965	PRC Foreign Minister Chen Yi declines Indonesia's request for assistance in acquiring an atom bomb
October 1, 1965	U.S. Secretary of State Rusk expresses concern over Indonesian nuclear aspirations to Soviet Foreign Minister Gromyko
October 1, 1965	Aborted coup in Indonesia discredits Sukarno and ends possibility of an Indonesian bomb
October 5, 1965	Armed Forces Day passes without an atom bomb test
March 11, 1966	Sukarno transfers power to General Suharto
June 19, 1967	Indonesia signs formal safeguards agreement with the International Atomic Energy Agency (IAEA)

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